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IN THE

# Supreme Court of the United States

October Term, 1962

NO. 507

HAHN & CLAY, *Petitioner*

v.

A. O. SMITH CORPORATION, *Respondent*

## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

*Of Counsel:*

JACK W. HAYDEN
HAYDEN & PRAVEL

B. R. PRAVEL
500 Jefferson Building
Houston 2, Texas
*Attorney for Petitioner*

*Alpha Law Brief Co., 402 M & M Bldg., Houston 2*

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Petitioner prays that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Fifth Circuit, entered in the above entitled cause on July 3, 1963.

## CITATIONS TO OPINIONS BELOW

The memorandum opinion of the District Court is reported at 212 F. Supp. 22, and a copy of such memorandum opinion is printed in the printed record (R. 940-963). The opinion of the Fifth Circuit Court of Appeals, printed in Appendix B hereto, infra, pp. 1-20, is reported in 138 USPQ 569 and in _____ F. 2d _____.

## JURISDICTION

The judgment of the Court of Appeals was entered on July 3, 1963 (R. 1192). Rehearing was denied on August 29, 1963 (R. 1207). The jurisdiction of this Court is invoked under 28 U.S.C., Sec. 1254 (1).

## QUESTIONS PRESENTED

1. Where the lower courts have acknowledged that the claims of a patent do not define the limits necessary to produce the desired result of the patent, can such claims nevertheless be validated by reference to the specification of the patent under Title 35 U.S.C. Sec. 112, as amended in 1952?

2. Where it is difficult or impossible for a patentee to express his alleged distinction over his own prior expired patent, and his claims therefore fail to inform the public of his monopoly limits, should such failure to express the monopoly limits be excused, contrary to the public interest involved?

## STATUTE INVOLVED

The statutory provisions involved are Title 35, U.S.C., Sec. 112, July 19, 1952, 66 Stat. 798, a copy of which is printed in Appendix A, infra. In particular, the second and third paragraphs of said Section 112 are involved, the third paragraph having been added in 1952. This Court has not considered these new provisions of Section 112 since they were added in 1952.

## STATEMENT

The case originated as an action for declaratory judgment with respect to alleged trade secrets and also for breach of contract (R. 15). Respondent ultimately filed a counterclaim (R. 76) in which it was alleged that Petitioner infringed United States Patent 2,480,369, referred to in the courts below and herein as "Jasper 369" (copy at R. 1082-1084). The District Court denied all relief to both sides, except for infringement of Jasper 369 (R. 963). The Court of Appeals for the Fifth Circuit affirmed the District Court (Appendix B, infra, pp. 1-20).

Factually, the present litigation arose because Petitioner submitted bids for the manufacture of multi-layer vessels* for a U.S. missile base at Cheyenne, Wyoming and later for another missile base at the Cooke Air Force Base in California.

The basic manufacturing process for making multi-layer vessels was disclosed in the Stresau reissue patent Re. 22,251 (Stresau 251) which was held by Respondent for the full seventeen year monopoly until such patent expired in 1950. The Jasper 369 patent, which is the patent presented for consideration in this Petition, like the expired Stresau 251, relates to a process for the manufacture of multi-layer vessels (District Court's Opinion, R. 942, 943). Jasper 369 contended that his invention was in intentionally applying *additional* force to get a so-called "pre-stress" condition.

However, neither the Jasper 369 specification nor any

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* Multi-layer vessels are pressure cylinders or vessels in which the thickness or wall of the vessel is composed of a large number of layers of steel welded together as fully described in the expired Stresau Reissue patent Re. 22,251, a copy of which appears in the record (R. 1073-1076).

of the claims of that patent ever specified the amount of the *additional* force which was necessary for obtaining such "pre-stress" as compared to the force required to press the layers together as taught by the expired Stresau 251 patent (Footnote 17 of the Court of Appeals Opinion, printed in Appendix B, p. 14). Because of such vital defect in the Jasper 369 patent, neither Petitioner nor any other member of the public can tell when the forces applied to the multi-layers exceed that which is legally permissible under the expired Stresau 251.

The District Court, although "not free of doubt", excused the inability of Respondent to define the alleged distinction of Jasper 369 over its own expired Stresau 251 (R. 954). The Court of Appeals, in its opinion, infra, p. 16, specifically noted the defect of the Jasper 369 claims as follows (emphasis added):

> "Although the *claims do not specify the precise limits of force necessary to produce the desired result*, we believe that the claims, when viewed in light of the specifications, sufficiently apprise those learned in the art of the limits of the monopoly asserted. See Eibel Process Co. v. Minnesota & Ontario Paper Co., supra; Minerals Separation, Ltd. v. Hyde, 1916, 242 U.S. 261."

## REASONS FOR GRANTING THE WRIT

1. Insofar as patents are concerned, there is nothing more important to the public than the provisions of Section 112 of Title 35, U.S. Code, which requires that the *claims* of a patent define the precise limits of the patent monopoly.

"To sustain *claims* so indefinite as not to give the notice required by the statute would be in direct contravention of the public interest which Congress therein recognized and sought to protect." (Emphasis added)

—*United Carbon Co. v. Binney & Smith Co.*, 1942, 317 U.S. 228, 233; 63 S.Ct. 165, 168; 87 L.Ed. 232, 235.

"The *limits* of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others, and the assurance that the subject of the patent will be dedicated ultimately to the public." (Emphasis added)

—*General Electric Co. v. Wabash Appliance Corp.*, 1938, 304 U.S. 364, 369; 58 S. Ct. 899, 902; 82 L. Ed. 1402, 1405.

In this case, the Court of Appeals held that, *"the claims* do not specify the precise *limits* of the force necessary to produce the desired result" (Appendix B, infra, p. 16).

The Court of Appeals attempted to remedy the *claim* defect by reference to the patent specification, citing *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 1923, 261 U.S. 45; and *Minerals Separation, Ltd. v. Hyde*, 1916, 242 U.S. 261, and in doing so, the Court of Appeals specifically held contrary to and in conflict with the controlling Supreme Court law as more recently laid down in *General Electric Co. v. Wabash Appliance Corp.*, 1938, 304 U.S. 364, 58 S. Ct. 899, 82 L. Ed. 1402; *United Carbon Co. v. Binney & Smith Co.*, 1942, 317 U.S. 228, 63 S. Ct. 165, 87 L. Ed. 232; *Universal Oil Products Co. v. Globe Oil & Refining Co.*, 1944, 322 U.S. 471, 64 S. Ct. 1110, 88 L. Ed.

1399; and *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 1949, 336 U.S. 271, 69 S. Ct. 535, 93 L. Ed. 672.

The Court of Appeal's erroneous reliance upon the *Eibel Process* case and the *Mineral Separation* case is believed to have resulted from a conflict between the Supreme Court cases. Thus, the Court of Appeals interprets the *Eibel Process* case and the *Minerals Separation* case as excusing a failure to define the limits of the claimed monopoly when there is difficulty in expressing the limits. However, the more recent Supreme Court cases hold to the contrary without expressly overruling the *Eibel Process* case and the *Minerals Separation* case.

> "We may assume that Pacz has sufficiently informed those skilled in the art how to make and use his filament. The statute has another command. . . . Congress requires of the applicant 'a distinct and specific statement of what he *claims* to be new, and to be his invention'."
>
> "The Circuit Court of Appeals below suggested that 'In view of the difficulty, if not impossibility, of describing adequately a number of microscopic and heterogeneous shapes of crystals, it may be that Pacz made the best disclosure possible * * *.' Page 905 of 91 F. 2d. But Congress requires, for the *protection of the public*, that the inventors set out a definite limitation of his patent; that condition must be satisfied before the monopoly is granted: . . . The product claims here involved cannot be validated by reference to the specification." (Emphasis added)
>
> —*General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 368, 372; 58 S. Ct. 899, 901, 903; 82 L. Ed. 1402, 1405, 1407.

> "Whether the vagueness of the *claim* has its source in the language employed or in the somewhat indeterminate character of the advance claimed to have been made in the art is not material. An invention must be capable of accurate definition, and it must be accurately defined, to be patentable." (Emphasis added)
>
> —*United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 237; 63 S.Ct. 165, 170; 87 L.Ed. 232, 237.

The apparent conflict between the Supreme Court cases on this fundamental and important doctrine of law needs to be resolved, particularly since the determination as to the scope of the patent monopoly is a daily problem in the Patent Office and is presented in almost every patent reaching the lower courts.

2. Title 35, U. S. Code, Section 112 was amended in 1952 to add the third paragraph which provides in part ". . . . such claim shall be construed to cover the corresponding structure, material, or acts described in the specification . . .". In this case, the Fifth Circuit Court of Appeals has so interpreted 35 U.S.C. 112 as to permit an incorporation of the specification into the patent claims. This is in direct conflict with the view of the District of Columbia Court of Appeals in *Siegel v. Watson*, 267 F. 2d 621, 623 (1959) in which Justice Burton and Judge Fahy held, with Judge Burger dissenting:

> "Appellant believes that when reading the claims one must incorporate the specification in determining whether or not to grant the patent. He relies upon the third paragraph of 35 U.S.C. § 112 (1952). Appellee counters, and we agree, that the claims of an application are the correct measure; limitations not ex-

pressed in the claims, though disclosed in the specifications, are not read into the claims."

Since this statute, 35 U.S.C. § 112 has wide interest throughout the courts, is generally applicable to all patents, and has not been considered by this Court since its amendment in 1952, it is submitted that it is extremely important for the Supreme Court to express itself at this time to settle once and for all the conflict in the lower courts.

3. In addition to the private interests of the litigants herein, the public interest is also paramount with respect to the manufacture of multi-layer vessels since such vessels are primarily used by the United States government in connection with its missile bases and similar installations. Furthermore, it is improbable that there will be a conflict between Circuit Courts of Appeals with respect to the Jasper 369 patent itself, due to the fact that only the litigants, and those in privity with them, are engaged in competition in the manufacture of multi-layer vessels. Under such circumstances, it is recognized that certiorari may be granted. *Mackay Radio & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86, 89; 59 S.Ct. 427, 429; 83 L.Ed. 506, 508.

4. An injunction prohibiting Petitioner from infringing the *claims* of Jasper 369 patent has been granted by the District Court (R. 973). An injunction is ordinarily considered an extraordinary remedy and clearly should not be issued where the language of a patent claim fails to express its limits, as held here by the appellate court. If the patentee cannot define the limits of his alleged invention in the claims of the patent, that inability should

not be used as a weapon against others who are equally unable to determine such limits.

## CONCLUSION

For the foregoing reasons, this Petition for a Writ of Certiorari should be granted.

Respectfully submitted,

Date Sept. 27, 1963

B. R. Pravel

B. R. Pravel
Suite 1111, 500 Jefferson Bldg.
Houston 2, Texas
*Attorney for Petitioner*

## CERTIFICATE OF SERVICE

Service of this Petition has been made upon A. O. Smith Corporation, Respondent, by mailing a copy thereof to Mr. J. V. Martin, its attorney, First City National Bank Building, Houston 2, Texas, this 27 day of Sept. 1963.

B. R. Pravel

Attorney for Petitioner

## APPENDIX A

Title 35, United States Code, Section 112, July 19, 1952, 66 Stat. 798.

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

## APPENDIX B

IN THE

# United States Court of Appeals

FOR THE FIFTH CIRCUIT

No. 19942

HAHN & CLAY, *Appellant*
versus
A. O. SMITH CORPORATION, *Appellee*

A. O. SMITH CORPORATION, *Appellant*
versus
HAHN & CLAY, LAWRENCE F. MEGOW, and RAYMOND F. PECHACEK, *Appellees*

**Appeals from the United States District Court for the Southern District of Texas**

(July 3, 1963)

Before HUTCHESON, RIVES, and GEWIN, Circuit Judges

HUTCHESON, Circuit Judge: These appeals are from the judgments entered in three separate causes of action, all of which grow out of a controversy concerning the con-

struction of "multi-layer pressure vessels."[1] Although the case began as one for a declaratory judgment to define the limits of a patent held by A. O. Smith Corporation, with Hahn & Clay as the plaintiff, the posture at the time of trial was such that A. O. Smith stood in the position of plaintiff, alleging patent infringement and misappropriation of trade secrets by defendants Hahn & Clay, Megow, and Pechacek. Hahn & Clay instituted a cross-action against A. O. Smith for wrongful interference with certain contract negotiations.

The background and controlling facts are fully and fairly set forth in the opinion of the district judge, reported at 212 F. Supp. 22 (1962). For our purposes, they may be briefly summarized. A. O. Smith held the dominant patent (the Stresau 118) for the multi-layer pressure vessel and the reissue patent (the Stresau 251), both of which expired on September 4, 1950. In addition, A. O. Smith holds a patent (the Jasper 369) on a method of "pre-stressing" such pressure vessels; it is this last patent which A. O. Smith alleges has been infringed by Hahn & Clay, and the latter has brought into issue the validity of that patent.[2]

Defendants Megow and Pechacek are former employees of A. O. Smith and, during their employment, held respon-

[1] A pressure vessel is a tank or container used to store liquids or gases which are confined under great internal pressure. Although such a vessel may be constructed from one sheet of steel (a "single-layer pressure vessel"), it has been found that, under certain circumstances, greater efficiency will result from a vessel constructed of several thin sheets of steel (a "multi-layer pressure vessel").

[2] A. O. Smith also alleged below that Hahn & Clay has infringed patent No. 2,372,723 (the Jasper 723). Like Jasper 369, it is concerned with a method of pre-stressing. The trial court held that Hahn & Clay had not infringed Jasper 723, and A. O. Smith does not appeal from that holding.

sible positions. Both left A. O. Smith in 1954 and went to work for Hahn & Clay.[3] In 1958, Hahn & Clay undertook to prepare and submit bids for the construction of multi-pressure vessels pursuant to two government contracts. Although A. O. Smith was the low bidder for the first job (the Cheyenne job), Hahn & Clay's negotiations with the prime contractor for the second job (the Cooke job) reached a fairly advanced stage. A. O. Smith thereupon sent a telegram to various interested parties, notifying them that it would take action to enjoin Megow and Pechacek from disclosing, and Hahn & Clay from utilizing, any A. O. Smith procedures in connection with the construction of multi-layer pressure vessels. Hahn & Clay's proposed contract for the construction of multi-layer pressure vessels for the Cooke job was subsequently rejected.

In its cross-action, Hahn & Clay alleged that A. O. Smith's sending of that telegram constituted a tortious, unprivileged interference with its contract negotiations and resulted in the loss of the contract.

A. O. Smith contends, in turn, that Megow and Pechacek, in preparing the bids for the Cheyenne and Cooke jobs, wrongfully disclosed various of its trade secrets. After the litigation began, Hahn & Clay bid upon the construction of, and subsequently built, the so-called Dynamic Research vessel. A. O. Smith contends, further, that in so doing, the defendants misappropriated various of its trade secrets and infringed the Jasper 369 patent.

[3] The trial judge found, and the finding is not attacked, that neither Megow nor Pechacek left A. O. Smith's employ and entered that of Hahn & Clay from any improper motives.

(1) *The Contract Interference Cause*

Hahn & Clay received the invitations to bid on the Cheyenne and Cooke jobs in June, 1958, and it thereupon wrote A. O. Smith, inquiring if it was not true that the latter's patent on multi-layer pressure vessels had expired. In reply, A. O. Smith stated that, while the original patent had expired, it owned other patents which might be infringed and directed Hahn & Clay's attention to the fact that Megow and Pechacek had, upon being employed by A. O. Smith, signed "secrecy agreements"; it warned against any use, through Megow, of its trade secrets relating to the construction of such vessels.

Hahn & Clay was, meanwhile, going forward with its preparation of bids for the Cheyenne and Cooke jobs. Megow and Pechacek worked actively on preparing those bids, their work consisting primarily of planning and estimating; Megow, in addition, consulted with engineers representing the various interested parties in the Cooke job. Negotiations for the Cooke job reached the point where it was contemplated that Wall Cyrogenics would take a sub-contract for various equipment, and that Hahn & Clay would, in turn, manufacture the pressure vessels under a sub-contract with Wall Cyrogenics. Although Wall Cyrogenics and the prime contractor[4] never entered into a contract, Wall Cyrogenics did forward a purchase order to Hahn & Clay, but no contract was consummated between the latter two companies.

[4] Manhattan Construction Co., Paul Hardeman, Inc., and Utah Construction Co. comprised the joint venture which held the prime contract.

On August 20, 1958, A. O. Smith, acting through one of its officers, sent a telegram to Hahn & Clay, with copies to Wall Cyrogenics, Paul Hardeman, Inc., Utah Constructions Co., U. S. Army Engineers, and Air Force Ballistic Missile Division, warning Hahn & Clay that it would take action to enjoin Megow and Pechacek from disclosing, and Hahn & Clay from utilizing, "any of [A. O. Smith's] methods and processes having to do with the manufacture of multi layer vessels." Shortly thereafter, Hahn & Clay was notified that the prime contractor had refused to approve the proposed contract, but no reason for this refusal was given in the canceling telegram.

In holding for A. O. Smith, the trial court found that A. O. Smith was warranted in sending the telegram and that the telegram was not the proximate cause of the loss of the contract, it resulting, instead, from the failure of the parties to agree on terms.

A. O. Smith was privileged to send the telegram, and the copies, so long as, in so doing, it acted in good faith; that is, believing that it held secrets entitled to legal protection and motivated, not by malice, but by the belief that the contract negotiations would result in the impairment of the competitive value of those secrets by leading to their disclosure and that the sending of the telegram would serve to prevent that disclosure.[3] The Restatement of Torts states the rule as follows: "One is privileged purposely to cause another not to . . . enter into or continue a business

[2] The Cooke job consisted of a contract for the Cooke Air Force Base near Los Angeles, California.

[3] See Bryan v. Sid W. Richardson, Inc., 5th Cir. 1958, 254 F. 2d 191, 198; McIlhenny Co. v. Gaidry, 5th Cir. 1918, 250 Fed. 613, 622.

relation, with a third person by in good faith asserting or threatening to protect properly a legally protected interest of his own which he believes may otherwise be impaired or destroyed by the . . . transaction."[7]

Hahn & Clay contends, however, that the sending of copies of the telegram to the various named parties not only constituted the interference of which complaint is made, but, in itself, conclusively establishes bad faith, there being no justification for A. O. Smith's having done so. We agree with the district judge that such is not the case. Those to whom the copies were sent were, if not present customers of A. O. Smith, at least potential customers, and it could have been thought prudent to apprise them of the situation at the outset, rather than waiting until, because of litigation, deliveries by Hahn & Clay were interrupted. It is argued, further, that the fact that A. O. Smith, after Hahn & Clay filed its action for a declaratory judgment, sought to have the action dismissed, establishes bad faith in A. O. Smith's assertion, in the telegram, that it would undertake litigation if necessary to establish its rights. The warning itself was a legitimate sanction, provided that the requisite good faith existed at the time that it was given, and the legal protection afforded the warning was not dependent on A. O. Smith's attitude toward, and at the time of, subsequent litigation.[8]

The judgment on this cause must be affirmed for another reason. The trial judge found that the telegram was not the cause of Hahn & Clay's failure to get the contract;

[7] American Law Institute, Restatement of Torts, § 773 (1939).
[8] See Bryan v. Sid W. Richardson, Inc., **supra** note 7.
[9] See Bryan v. Sid W. Richardson, Inc., **supra** note 7.

rather, the failure resulted from the inability of the parties to reach mutually agreeable terms. Hahn & Clay contends, however, that the failure to arrive at mutually satisfactory terms was the result of the sending of the telegram, which raised the possibility that deliveries under a subcontract might be interrupted by litigation. The finding of the trial judge is, we think, amply supported by evidence tending to show that the causes for the rejection of the contract were the stringent nature of the financial conditions sought to be imposed by Hahn & Clay[10] and doubt as to the financial ability of a company the size of Hahn & Clay to fulfill the relatively large sub-contract.

Upon the considerations and for the reasons above given, as well as those stated by the district judge, we affirm the judgment in favor of A. O. Smith in Hahn & Clay's cross-action.

*(2) The Trade Secrets Cause*

A. O. Smith contends that, in the preparation of the bids for the Cheyenne and Cooke jobs and in the construction of the Dynamic Research vessel, Megow and Pechacek wrongfully disclosed, and Hahn & Clay wrongfully util-

[10] In a letter sent to Wall Cyrogenics some thirty days after the telegram, Hahn & Clay presented various conditions, mostly of a financial nature, which it apparently contemplated would form part of the contract. Among those conditions was the assignment by Wall Cyrogenics of its subcontract in the full amount of the Hahn & Clay bid, to assure the latter of partial payments to cover materials purchased for the job, an "unconditional written guarantee" from the prime contractor that Hahn & Clay would be promptly reimbursed in full for all invoices covering materials purchased for the job, and indemnity by Wall Cyrogenics against any loss or damage that might result from delayed deliveries by litigation brought by A. O. Smith.

ized, various of A. O. Smith's trade secrets, pertaining to certain basic cost data and construction details. Relief is sought by way of injunction and damages.

Both Megow and Pechacek, while employed by A. O. Smith, occupied positions of trust and confidence and, upon being employed, signed secrecy agreements, in which they agreed not to reveal to others information as to any of the "records, data, methods, processes and inventions" owned, held, or conceived on behalf of A. O. Smith, which would in any manner prejudice or jeopardize A. O. Smith's best interests. Much of Megow's work consisted of time studies, that is, he studied the number of labor hours necessary to perform the various operations in constructing A. O. Smith's products, including the multi-layer pressure vessel. Pechacek worked directly under Megow for the last several years of his employment.

A. O. Smith contends that its cost information, particularly, the data as to the number of labor hours necessary to construct a multi-layer vessel, is a trade secret, which was utilized, and thus disclosed, by Megow and Pechacek in their work on the Cheyenne and Cooke bids, and that the cost figures developed for those bids were later used in connection with the Dynamic Research vessel.

Texas, in common with other jurisdictions, affords protection to trade secrets and relief for their misappropriation. *Hyde Corp. v. Huffines*, 1958, 158 Tex. 566, 314 S.W. 2d 763; *K & G Oil Tool and Service Co. v. G & G Fishing Tool Service*, 1958, 158 Tex. 594, 314 S.W. 2d 782. In the former case, the Texas Supreme Court quoted with approval the following proposition from the Restatement of

Torts: "One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if . . . (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him . . ."[11]

Nevertheless, the legal protection afforded trade secrets does not preclude the utilization by one of skills acquired, or proficiencies developed, while working for a former employer. *Welex Jet Services, Inc. v. Owen*, Tex. Civ. App., 1959, 325 S.W. 2d 856.[12] Thus, the crucial issue as to the alleged misappropriation of confidential cost information was whether Megow's and Pechacek's planning and estimating work on the Cheyenne and Cooke jobs constituted the use of a skill or involved the disclosure of trade secrets.

The trial judge found that, in their estimating and planning work, Megow and Pechacek were doing no more than exercising a skill developed while working for A. O. Smith. Upon consideration of the relevant evidence, we do not believe that he erred in so finding.

A. O. Smith contends, further, that various trade secrets as to construction details for the multi-layer pressure ves-

[11] American Law Institute, Restatement of Torts, § 757 (1939). The Restatement of Agency provides: "Unless otherwise agreed after the termination of the agency, the agent . . . (c) has a duty to account for profits made by the sale or use of trade secrets and other confidential information, whether or not in competition with the principal . . ." American Law Institute, Restatement of Agency (2d) § 396 (1958).

[12] There, the court stated: "On the other hand, a former employee is not under obligation to forego the exercise of his inventive powers, even if they were incited by knowledge gained in the performance of his contractual duties. The efficiency and skills which he developed through that experience belong to him, not to his former employer." 325 S.W. 2d at 858.

sel were disclosed by Megow and Pechacek in connection with the Cheyenne and Cooke jobs and the Dynamic Research vessel.

As to the alleged disclosure of trade secrets in connection with the Cheyenne and Cooke bids, the trial judge found that, while Megow and Pechacek undoubtedly learned "the general methods to be followed in fabricating a multi-layer vessel while employed at Smith and made full use of this knowledge in work on the Cooke and Cheyenne bids, . . . these methods were not so unusual or unique, so secret or confidential, as to be within terms of the contract or to constitute a trade secret. . . ." In attacking that finding, A. O. Smith here points to specific examples of construction details which, it alleges, were trade secrets and were disclosed by the defendants, for example, information as to welding details involved in the construction of the vessel. As the trial judge noted, however, work on the multi-layer pressure vessel was no more secret than on any other A. O. Smith product, the wrapping machines and vessels under construction were displayed to visiting groups, and much of the manufacturing data was publicized by A. O. Smith in advertising brochures, bulletines, and technical papers. We think it clear that the court's finding of fact on this point is amply supported by the evidence.

The trial judge found, further, that A. O. Smith had failed to establish the misappropriation of any of its trade secrets in the construction of the Dynamic Research vessel. Particularly urged on appeal by A. O. Smith is the argument that its trade secrets were misappropriated in the building of the wrapping machine used in the con-

struction of the Dynamic Research vessel. That wrapping machine was designed by an outside engineer, employed by Hahn & Clay after the beginning of this litigation. A. O. Smith contends, however, that while Megow, prior to this litigation, was attempting to design such a machine, Pechaceek made available to him various secret A. O. Smith drawings of its machinery; that the machine designed by the outside engineer, after a "supposed" scrapping of Megow's drawings, lacked a "certain feature"[11] necessary to the machine's efficient operation; and that Hahn & Clay added that "certain feature" to it before attempting to use it. It is argued that the similarity in the machines, particularly when viewed in light of the addition of that "certain feature," sufficed to establish misappropriation. However, the outside engineer employed by Hahn & Clay testified that he added that feature to the machine, and his testimony was credited by the trial court. Insofar as A. O. Smith alleged the misappropriation of its trade secrets in the construction of the Dynamic Research vessel, the issues were ones of fact, the evidence was conflicting, and the findings of the trial judge, which resolved those issues against A. O. Smith, are not clearly erroneous.

We have carefully considered the arguments advanced by A. O. Smith in this phase of the case and find nothing calling for reversal. The judgment of the trial court, in favor of the defendants on A. O. Smith's cause for misappropriation of trade secrets, is therefore affirmed.

[11] A. O. Smith makes no attempt here to explain exactly what that "certain feature" is. The defendants explain it as being nothing more than "a reel like a fishing reel that winds up the excess of the tension bands" and comment that "such excess on the tension bands obviously either had to be coiled on a reel or left dangling."

### (3) *The Patent Cause*

The trial judge found that claims 1-5 of the Jasper 369 patent, held by A. O. Smith, were valid and were infringed by defendant Hahn & Clay in the construction of the Dynamic Research vessel. The teachings of the various patents involved in this case are fully discussed in the opinion of the district judge, and a short statement will suffice here.

The Stresau reissue patent, Stresau 251, illustrated the use of tension bands or straps for the purpose of drawing closely together the various laminations of the multi-layer vessel. Such bands are wrapped circumferentially around the first, and then each succeeding, wrap and pressed tightly against the original cylinder; with one end of the wraps secured, great force is applied to the other end, so that the wrap is pressed tightly against and around the original cylinder, with the result that the steel plates are brought into very close surface contact with each other. Jasper 369 represents a method of pre-stressing the vessels during the course of construction. The patent teaches that, as each wrap is applied, it may be tightened, by means of the tension bands, not only to an extent necessary to remove whatever voids may exist between the layers, but, *in addition*, to an extent sufficient to reduce the diameter of the partially completed structure, with the end result that the desired pre-stress condition is achieved.[14]

[14] That result is achieved because, upon tightening by the bands, initial compressive stresses are set up in the metal of the inner layers, and initial tensile stresses are set up in the metal of the outer layers. As the outer layers are applied, greater force is utilized than with the earlier or inner layers. The final result is that the first several layers are placed under compressive stress, while the balance of outer layers are placed under tensile stress.

We begin with the propositions that a presumption of validity followed from the issuance of the Jasper 369 patent, so that the burden was on Hahn & Clay, urging its invalidity, to establish it, 35 U.S.C. §282,[15] and that the findings of the trial court as to infringement, an issue of fact, will not be reversed unless clearly erroneous, Rule 52(a), F.R.C.P.; *U. S. Industries, Inc. v. Otis Engineering Corp.*, 5th Cir., 1958, 254 F. 2d 198.[16] Insofar as the question of the validity of the patent turns upon the application of the correct legal standard to the facts, whether undisputed or as found below, in order to determine whether the subject matter of the patent constitutes invention, it is, of course, one of law and fully reviewable. *Great A & P Tea Co. v. Supermarket Equipment Corp.*, 1950, 340 U.S. 147; *Houston Oil Field Material Co. v. Claypool*, 5th Cir., 1959, 269 F. 2d 134; *Little Mule Corp. v. Lug All Co.*, 5th Cir., 1958, 254 F. 2d 268.

Hahn & Clay urges six specifications of error on this

[15] Mumm v. Jacob E. Decker & Sons, 1937, 301 U.S. 168; Radio Corp. v. Radio Engineering Labs., Inc., 1934, 293 U.S. 1; Cameron Iron Works, Inc. v. Stekoll, 5th Cir., 1957, 242 F. 2d 17.

Invoking the rule that the presumption of validity does not attach as against pertinent prior art that was not considered by the Patent Office at the time that the patent in issue was being considered, Fritz W. Glitsch & Sons, Inc. v. Wyatt Metal & Boiler Works, 5th Cir., 1955, 224 F. 2d 331, and arguing that Stresau 251, the most pertinent prior art, was not before the Examiner when he considered Jasper 369, Hahn & Clay attempts to avoid the presumption. It appears, however, that the Stresau reissue patent (Stresau 251) and Jasper 369 were pending before the same Examiner at the same time, so that the Examiner was aware of the prior art. See Bryan v. Garrett Oil Tools, Inc., 5th Cir., 1957, 245 F. 2d 365.

[16] Only rarely, in circumstances not here present, does the issue become one of law. See Fip-Right, Inc. v. Safeway Products, Inc., 5th Cir., 1963, 315 F. 2d 22; Industrial Instrument Corp. v. The Foxboro Co., 5th Cir., 1962, 307 F. 2d 783; Cameron Iron Works, Inc. v. Stekoll, 5th Cir., 1957, 242 F. 2d 17.

appeal, three being that claims 1-5 of Jasper 369 are invalid for failure to define the limits of the monopoly over the expired Stresau 251; that the method of claims 1-5 of Jasper 369 did not involve invention over Stresau 251, the difference being merely of degree and not of kind; and, that the use of the method of Stresau 251 necessarily results in the use of claims 3 and 4 of Jasper 369, so that claims 3 and 4 must either be invalid of not infringed. Underlying those arguments, however, is the basic contention that there is no way to determine when the force which is being applied in the construction of the multi-layer pressure vessels passes the limits of the Stresau patent, by virtue of the method of which the layers are pressed closely together, and begins to infringe upon the Jasper 369 patent, by virtue of the method of which the desired prestressing is achieved.[17]

The applicable legal principles are clear enough. Jasper 369 is invalid if it does not represent an invention over Stresau 251, 35 U.S.C. §101,[18] if its claims are not sufficiently specific to apprise the public of the limits of the

[17] The expired Stresau patents calls for the application of force, with the use of tensioning bands, to press the layers together. Jasper 369 teaches that additional pressure will result in a pre-stressed condition. There is nothing in Stresau 251 stating how much pressure should be used upon the bands to bring the layers into close surface contact, nor is there anything in Jasper 369 stating how much pressure should be used in producing the pre-stressed condition. Hahn & Clay argues that, therefore, in the fabrication of the vessel under the Stresau method, there is no way to know when the force which is being applied passes the limits of the Stresau patent and begins to infringe upon the Jasper patent.

[18] And, as Hahn & Clay correctly notes, a mere change of degree does not constitute "invention." See generally 1 Walker on Patents § 31 (Deller ed. 1937)

monopoly, 35 U.S.C. §112,[19] or if it amounts to nothing more than the scientific statement or explanation of a result inherently or necessarily produced by the method of Stresau 251.[20]

The issues involved here are, as the trial judge observed, close ones, and the difficulty lies in applying the established principles to the facts of this particular case. The question of invention was here, as it ordinarily is, one of fact, and we do not believe that the trial judge erred in finding that Jasper 369 was not invalid for lack of invention. We therefore sustain his finding that Jasper 369 was an improvement over the Stresau patents and an improved alternative method to the Kepler method of prestressing.[21] Thus, as A. O. Smith points out, the Stresau patent teaches only that the outer layers should be drawn into close contact, while the Jasper patent method results in putting the inner layers in compression and the outer layers in tension during the fabrication of the vessel, so that the stresses

[19] While the claims measure the invention, Altoona Public Theatres, Inc. v. American Tri-Ergon Corp., 1935, 294 U.S. 464, the claims are to be read in light of the specifications. E.g., American Fruit Growers, Inc. v. Brogdex Co., 1931, 283 U.S. 1; Motion Picture Patents Co. v. Universal Film Mfg. Co., 1917, 243 U.S. 502; Carnegie Steel Co. v. Cambria Iron Co., 1902, 185 U.S. 402.

[20] DeForest Radio Co. v. General Electric Co., 1931, 283 U.S. 664.

[21] The Kepler method, used prior to Jasper 369, calls for the injection into the vessel of a relatively incompressible fluid under high pressure, after completion of the vessel. Thus, the inner layers are pressed outward to a point beyond the normal elasticity of the steel. When that internal pressure is released, the inner layers do not contract to their original shape but remain under compressive stress (that is, compressed by the outer layers), and the outer layers remain under a tensile stress (that is, exerting a confining pressure on the inner layers). By teaching a method of prestressing during the course of construction, Jasper 369 avoids the additional step required under Kepler.

caused by the pressure of the gas in the vessel will be distributed among the layers rather than concentrated on some of the layers. The object of the Jasper method is substantially different from the object of Stresau, and the difference between Jasper and the prior art is more than a mere matter of degree. See *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 1923, 261 U.S. 45.

Although Hahn & Clay contends that the use of the method of Stresau 251 necessarily results in that same effect and hence in the use of claims 3 and 4 of Jasper 369, the evidence shows, at the most, that the method of Stresau 251 results in some small amount of initial compressive stress being set up; the evidence certainly does not conclusively establish that the compressive and tensile stresses produced by the Jasper method always necessarily result from the use of the method of Stresau 251.

We are further in accord with the finding that the claims of the Jasper patent sufficiently define the monopoly for its method. Although the claims do not specify the precise limits of force necessary to produce the desired result, we believe that the claims, when viewed in light of the specifications, sufficiently apprise those learned in the art of the limits of the monopoly asserted. See *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, supra; *Minerals Separation, Ltd. v. Hyde*, 1916, 242 U.S. 261.[22]

Hahn & Clay contends, further, that A. O. Smith has failed to carry its burden of showing, by a preponderance

[22] The defects in the patents involved in General Electric Co. v. Wabash Appliance Corp., 1938, 304 U.S. 364, relied upon by Hahn & Clay, are not present here.

of the evidence, that claims 1, 2, and 5 were infringed, there being no probative evidence to support the finding of infringement. The evidence clearly establishes, and Hahn & Clay does not dispute, that the wrapping machine designed for the construction of the Dynamic Research vessel was of sufficient capacity to put a plurality of the inner layers in compression and the outer layers in tension, as called for by the Jasper claims.

However, it is argued that there is no evidence showing that the capacity was in fact used so as to achieve, by applying greater force to the outer than to the inner layers, the result of those claims. We are told that the error of the trial judge was in confusing the capacity of that wrapping machine with the force actually used in the construction of the vessel. But it is apparent that the trial judge was not confused; he expressly found, not only that the wrapping machine was of sufficient capacity to put the inner layers in compression and the outer layers in tension, but also that such was done in the construction of the Dynamic Research vessel.

The finding is not clearly erroneous. Dr. Pennington, A. O. Smith's expert, testified that claims 1-5 of Jasper 369 were applicable to the method used by Hahn & Clay in constructing the Dynamic Research vessel. Hahn & Clay argues, however, that that opinion is not probative evidence because it is unsupported by factual evidence. That will not at all do. Hahn & Clay's employees, Zanders, Kern, and Woodruff, testified as to the force used in constructing the Dynamic Research vessel, and it is manifestly evident from their testimony that the force used exceeded that called for by the Stresau method, and, par-

ticularly from Zanders' testimony, that greater force was applied to the outer layers than to the inner layers. The opinion evidence is supported by this factual evidence, and the factual and opinion evidence support the finding of infringement of claims 1, 2, and 5.

As to the remaining specifications of error, namely, that claims 3 and 4 of Jasper are invalid in view of Stresau and A. O. Smith's prior use, and that claims 1, 3, and 4 of Jasper are invalid because of new matter, we think that only a brief discussion is warranted.

The gist of the former contention is that the sole novel feature on the basis of which claims 3 and 4 were allowed was the use of tension bands (bands of low frictional contact); that those bands are anticipated by Stresau 251, which was not before the Board of Patent Appeals when it, reversing the Patent Examiner, allowed those claims; and that, in fact, the bands, and the other steps involved in those claims, had been used by A. O. Smith prior to the filing of the Jasper application. The evidence, however, certainly does not conclusively demonstrate that the method of the Stresau patent, relating to a method of multilayer fabrication, anticipated those claims, relating to a method of pre-stressing. Nor do we believe that the appellant has carried its burden of showing prior use, in that the evidence does not show that the method of Stresau was intended to, or ordinarily did, result in carrying out the method of the Jasper claims.

We are told, finally, that the phrase, "of relatively low frictional contact," was added to claims 1, 3, 4, and 5 by

amendment after the filing of the application, that the phrase constituted new matter, and that, therefore, the claims are rendered invalid. But we think that the drawings and specifications of the Jasper patent meet that argument, the alleged new matter being only words describing what was already shown in the drawings and specifications, the drawing being, of course, a part of the patent's disclosure and its subject matter being, therefore, subject to claim.

The trial court's judgment as to Jasper 369, resting on findings of infringement and validity that are not clearly erroneous, is affirmed.

(4) *Conclusion*

We must deal with a final point raised by this appeal. In the trial court, A. O. Smith requested that Hahn & Clay be ordered to return certain prints and documents in its possession, to A. O. Smith. These consist of prints of A. O. Smith vessels which it furnished to its customers and prints of its wrapping machine and mandrel. Although such prints were made available to A. O. Smith customers by it, it is contended that the delivery was not absolute and unconditional and was understood to be in confidence. Upon consideration of the nature of the prints and the circumstances of the case, including those surrounding their delivery to customers, we do not believe that the trial judge erred in denying the request.

We have carefully considered the many points raised on these cross-appeals, and we find no reversible error. For the reasons given by the district judge, and for the

reasons given above, the judgments appealed from are in all things

AFFIRMED.

A true copy
Test: EDWARD W. WADSWORTH
Clerk, U. S. Court of Appeals, Fifth Circuit
By G. J. Ganucheau, Deputy.
New Orleans, Louisiana Sep. 10, 1963